ORIGINAL
FILE

PAUL R. WATKINS (1899-1973)
DANA LATHAM (1898-1974)

CHICAGO OFFICE
SEARS TOWER, SUITE 5800
CHICAGO, ILLINOIS 60606
TELEPHONE (312) 876-7700
FAX (312) 993-9767

LONDON OFFICE
ONE ANGEL COURT
LONDON EC2R 7HJ ENGLAND
TELEPHONE 071-374 4444
FAX 071-374 4460

LOS ANGELES OFFICE
633 WEST FIFTH STREET, SUITE 4000
LOS ANGELES, CALIFORNIA 90071-2007
TELEPHONE (213) 485-1234
FAX (213) 891-8763

LATHAM & WATKINS
ATTORNEYS AT LAW
1001 PENNSYLVANIA AVENUE, N.W.
SUITE 1300
WASHINGTON, D.C. 20004-2505
TELEPHONE (202) 637-2200
FAX (202) 637-2201
TLX 590775
ELN 62793269

NEW YORK OFFICE
885 THIRD AVENUE, SUITE 1000
NEW YORK, NEW YORK 10022-4802
TELEPHONE (212) 906-1200
FAX (212) 751-4864

ORANGE COUNTY OFFICE
650 TOWN CENTER DRIVE, SUITE 2000
COSTA MESA, CALIFORNIA 92626-1925
TELEPHONE (714) 540-1235
FAX (714) 755-8290

SAN DIEGO OFFICE
701 "B" STREET, SUITE 2100
SAN DIEGO, CALIFORNIA 92101-8197
TELEPHONE (619) 236-1234
FAX (619) 696-7419

SAN FRANCISCO OFFICE
505 MONTGOMERY STREET, SUITE 1900
SAN FRANCISCO, CALIFORNIA 94111-2586
TELEPHONE (415) 391-0600
FAX (415) 395-8095

November 9, 1992

ORIGINAL

92-100

NOV - 9 1992

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

BY HAND

Ms. Donna R. Searcy
Secretary
Federal Communications Commission
1919 M Street, NW, Room 222
Washington, DC 20554

Re: Comments of Bell Atlantic Personal Communications, Inc. in
GEN Docket No. ~~90-314~~
Amendment of the Commission's Rules to Establish
New Personal Communications Services

Dear Ms. Searcy:

Enclosed on behalf of Bell Atlantic Personal Communications, Inc. ("BAPCI") are an original and four copies of BAPCI's Comments in the above-referenced proceeding.

Please call me if you have any questions concerning these comments.

Very truly yours,

Jan H. Ba

Mark S. Fowler
James H. Barker
of LATHAM & WATKINS

Enclosures
cc: Chairman Alfred C. Sikes
Commissioner Andrew C. Barrett
Commissioner Ervin S. Duggan
Commissioner Sherrie P. Marshall
Commissioner James H. Quello
Mr. Thomas P. Stanley
Robert Ungar, Esq.
Mr. Robert Pepper

014

175

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

ORIGINAL

NOV - 9 1992

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

	)	GEN Docket No. 90-314
	)	ET Docket No. 92-100
In the Matter of	)	
	)	RM-7140, RM-7175, RM-7617,
	)	RM-7618, RM-7760, RM-7782,
Amendment of the Commission's	)	RM-7860, RM-7977, RM-7978,
Rules to Establish New Personal	)	RM-7979, RM-7980
Communications Services	)	
	)	PP-35 through PP-40,
	)	PP-79 through PP-85

COMMENTS OF BELL ATLANTIC PERSONAL COMMUNICATIONS, INC.

Mark S. Fowler
James H. Barker
of LATHAM & WATKINS
1001 Pennsylvania Avenue, N.W.
Suite 1300
Washington, D.C. 20004

James R. Young
William L. Roughton
Of Counsel

and

Raymond L. Pickholtz
Chief Technical Advisor

for

Bell Atlantic Personal
Communications, Inc.

Dated: November 9, 1992

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

	)	GEN Docket No. 90-314
	)	ET Docket No. 92-100
In the Matter of	)	
	)	RM-7140, RM-7175, RM-7617,
	)	RM-7618, RM-7760, RM-7782,
Amendment of the Commission's	)	RM-7860, RM-7977, RM-7978,
Rules to Establish New Personal	)	RM-7979, RM-7980
Communications Services	)	
	)	PP-35 through PP-40,
	)	PP-79 through PP-85

COMMENTS OF BELL ATLANTIC PERSONAL COMMUNICATIONS, INC.

Mark S. Fowler
James H. Barker
of LATHAM & WATKINS
1001 Pennsylvania Avenue, N.W.
Suite 1300
Washington, D.C. 20004

James R. Young
William L. Roughton
Of Counsel

and

Raymond L. Pickholtz
Chief Technical Advisor

for

Bell Atlantic Personal
Communications, Inc.

Dated: November 9, 1992

TABLE OF CONTENTS

LIST OF ATTACHMENTS

EXECUTIVE SUMMARY

On August 14, 1992, the Commission released its Notice of Proposed Rule Making and Tentative Decision in this proceeding, seeking comment on the regulatory treatment of Personal Communications Services ("PCS"), including a variety of possible spectrum allocation and licensing schemes.[1/] The Commission introduced its NPRM with the stated desire to "bring that family of services known as PCS to the public expeditiously and with the least amount of regulatory delay."[2/] In achieving this goal, the Commission seeks to optimize four values in providing spectrum and a regulatory structure for PCS: (1) universality; (2) speed of deployment; (3) diversity of services; and (4) competitive delivery.[3/] Bell Atlantic's analysis of the regulatory treatment of PCS is guided by these principles.

In his introduction to Bell Atlantic's Comments, George Gilder sketches a vision of communications in which the most common personal computer is a "portable digital phone" that will provide the average citizen with an unparalleled access to a dynamic information network. The expansive definition of PCS proposed by the Commission encompasses Mr. Gilder's vision. The NPRM defines PCS as "a family of mobile or portable radio communications services which could provide services to individuals and business, and can be integrated with a variety of competing networks."[4/]

1/ See In the Matter of Amendment of the Commission's Rules to Establish New Personal Communications Services, Notice of Proposed Rule Making and Tentative Decision, Gen. Docket No. 90-314, ET Docket No. 92-100, RM-7140, 7175, 7617, 7618, 7760, 7782, 7860, 7977, 7978, 7979, 7980, PP-35 to 40, PP-79 to 85 (released August 14, 1992) at 3, ¶ 1 ("NPRM").

2/ Id.

3/ Id. at 4, ¶ 5.

4/ NPRM at 14, ¶ 29.

Bell Atlantic supports the Commission's broad definition of "personal communications services." In the face of the rapidly changing personal communications requirements of United States consumers,[5/] all four of the Commission's stated regulatory objectives in this proceeding -- universality, speed of deployment, diversity of services and competitive delivery -- are well-served by a flexible definition that allows for the greatest number of service offerings by diverse PCS providers.

If the innovative telecommunications services that the Commission and Mr. Gilder foresee are to develop, the participation of all competent firms, including local exchange and cellular carriers, must be assured. The experience, know-how, and infrastructure of these firms is central to the rapid deployment of intelligent PCS networks.

Furthermore, the rapid deployment of a universal personal communications service requires that at least two of the licenses awarded by the Commission be nationwide in scope. Nationwide licensees in PCS will speed resolution of industry standards, spur declines in equipment cost, assure the universal delivery to customers of uniform service no matter where in the country they are located, and enhance the United States' ability to compete in the global PCS telecommunications services and equipment markets. (Both Professor Alfred E. Kahn and Dr. Charles Jackson elaborate on these strengths in separate Attachments to these Comments.) Indeed, the issuance of nationwide licenses is now especially important as illustrated by the teaming

---

5/ See NPRM at 12, ¶ 25.

announcement by McCaw Cellular Communications and AT&T.[6] A Balkanized patchwork of PCS licenses will be less efficient in exploiting wired and wireless technologies to deliver seamless national service to an increasingly mobile population.

To assure diversity of service offerings and a fully competitive PCS market, the Commission should issue five PCS licenses. By authorizing five licenses, the Commission can award nationwide licenses while still maintaining a diverse mix of local or regional service providers. In addition, the issuance of five licenses will greatly enhance competition in wireless services.

The advent of PCS will have a momentous impact on the future development and configuration of telecommunications networks by improving significantly their flexibility and functionality.[7] Bell Atlantic therefore urges the Commission to allocate sufficient spectrum to and create a regulatory regime for PCS that will permit the widest possible range of personal communications services to develop and flourish in an atmosphere of vigorous competition.

---

[6] See Mary Lu Carnevale, AT&T-McCaw Link Stuns Baby Bells, Wall St. J., Nov. 6, 1992, at B1. This alliance may be viewed as the logical extension of "the economies that are driving cellular toward larger service areas." NPRM at 25, ¶ 58.

[7] See id. at 3, ¶ 4.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

	)	GEN Docket No. 90-314
	)	ET Docket No. 92-100
In the Matter of	)	
	)	RM-7140, RM-7175, RM-7617,
	)	RM-7618, RM-7760, RM-7782,
Amendment of the Commission's	)	RM-7860, RM-7977, RM-7978,
Rules to Establish New Personal	)	RM-7979, RM-7980
Communications Services	)	
	)	PP-35 through PP-40,
	)	PP-79 through PP-85

COMMENTS OF BELL ATLANTIC PERSONAL COMMUNICATIONS, INC.

Bell Atlantic Personal Communications, Inc. ("BAPCI"), on behalf of the Bell Atlantic Companies[1/] ("Bell Atlantic") and through its undersigned attorneys, hereby submits the following Comments in the above-captioned proceeding.

I. INTRODUCTION

In view of the importance of this proceeding and of the tremendous possibilities of PCS, Bell Atlantic offers the following overview by George Gilder. Mr. Gilder is an eminent author, thinker and futurist with particular expertise in computer, economic and telecommunications issues. His biography is attached hereto as Attachment A.

1/ These Comments are submitted by the Bell Atlantic telephone companies. The Bell Telephone Company of Pennsylvania, the four Chesapeake and Potomac Telephone Companies, the Diamond State Telephone Company, and the New Jersey Bell Telephone Company, as well as Bell Atlantic Mobile Systems, Inc., Bell Atlantic Paging, Inc., and Bell Atlantic Personal Communications, Inc.

As particles race toward the speed of light, they shed the invisible rainbows of the electromagnetic spectrum. In the 1990s, all world business is bursting into these rainbow realms, collapsing time and space and vibrating forth into new wavescapes of information.

With the collapse of time and space comes a dissolution of boundaries. Whether between companies, industries, or nations, the lines that divide are giving way to ever richer links of communications.

Impelling the change is the onrush of microchip and fiber optics technology. Advances in semiconductors will yield a 100 million transistor chip by 1995 and a billion transistor device by the year 2000. Advances in optics will produce a 25 terahertz all optical network by the turn of the century. Beginning now, these two advances will mean an ongoing millionfold rise in the cost effectiveness of computer and communications hardware during the next ten to fifteen years.

In the early 1990s, the Federal Communications Commission gave this movement a decisive push in the critical arena of broadcast video. Although European and Japanese companies remain committed to analog high definition television, the FCC guided U.S. industry toward a future of Advanced Digital Television. As a result, the convergence of the television and computer industries is arriving first in the United States.

As we move toward 1993, the digital dawn is engulfing the telephone industry. Once again the Federal Communications Commission has the opportunity to launch the U.S. in the vanguard of this change. This time the FCC should act to provide for rapid deployment of the technologies of personal communications services (PCS) that will spearhead progress in all information industries. As we head toward the next century, a swift movement of the U.S. to universal PCS will assure American competitiveness not only in telephony but also in computers and spur economic growth for the rest of the 1990s.

Over the next 10 years, the computer, broadcast, and telephone industries will converge to provide a new cornucopia of information services. As Nicholas Negroponte of MIT's Media Lab has predicted, video traffic will largely move from the air to wires and voice traffic will mostly move from wires to the air. A fibersphere of optical waveguides and switches will furnish the infrastructure for an atmosphere of radio frequencies full of digital signals from a variety of personal communications devices.

At the heart of all these changes will be the technology of PCS. Within the next decade, the most common personal computer will be a portable

digital phone that calculates and records, stores and forwards digital voice and data around the globe. As mobile as a watch and personal as a wallet, it will follow its user everywhere, managing communication, recognizing speech, navigating streets, taking notes, maintaining schedules, assembling personalized news and other information, and collecting electronic and voice mail. Eclipsing all current boundaries between phones, computers, radios, and notebooks, this new telecomputer industry will emerge from scores of companies in scores of different forms. Invented and developed mostly in the U.S., it will be the spearhead of a new global economy of information.

Central to all these developments, however, will be an advanced intelligent network. The system must be able to follow a user from place to place. It must be able to provide mail and other data without loading down the handset with power-hungry memories and processing. It must be able to identify different protocols and modulation schemes, thus obviating heavy hybrid phones. As the FCC has said, it should supply universal service, soon.

A fast universal deployment of intelligent PCS networks can best be accomplished by nationwide licensees using existing network infrastructures. Ideally operating at tens of milliwatts, the PCS handset could be used at home, in the office, and in pedestrian traffic, and could be plugged into a cellular system in automobiles for high powered transmissions. At home and in the office, it would use the intelligent digital switching fabric rapidly being installed by the phone companies. In automobiles, it would use the digital cellular systems now being developed for vehicular communications. Exploiting networks and systems already in place or under intense development, PCS could be quickly deployed. As an autonomous service, it would require expensive overlay networks that will delay adoption until late in the decade.

Local telephone companies alone, however, cannot deploy the full range of PCS. In order to create this new infrastructure for wireless information technology, PCS providers will have to tap the full capabilities of long distance, cellular, computer network, software, packet radio, and database firms and will face competition from all of them. This will be best for the United States. It is competition that builds competitiveness. Nowhere in the world economy is there an arena that will be so competitive during the next decade as the local loop.

By fully accommodating PCS, the FCC can unleash the forces of American creativity to establish the foundations for economic leadership into the next century. Fully accommodating PCS means inviting all companies into the competition and taking advantage of the huge investments of local exchange carriers in advanced intelligent networks. Fully accommodating PCS means creating nationwide licenses that accelerate the emergence of national standard

> interfaces and world class manufacturers. This is the combination that has given the U.S. world leadership in the computer industry, with three times as much computer power per capita as Europe or Japan. Over the next decade, it can work for the new computer industry of PCS as well.

Mr. Gilder's vision of PCS is one that Bell Atlantic shares. Framed against this backdrop, Bell Atlantic is pleased to offer the following Comments on issues raised in the NPRM.

II. LICENSING ISSUES

A. ALL QUALIFIED FIRMS SHOULD BE ELIGIBLE FOR PCS LICENSES

No qualified entity should be excluded from competing in the PCS marketplace.[2/] The Commission should affirm the fundamental principle that "consumers are best served when all firms are permitted to compete freely rather than when some are restricted or excluded from service offerings altogether."[3/] If PCS is to develop with vigor and innovation, the Commission must permit all qualified applicants to apply for PCS licenses and to bring their respective entrepreneurial strengths to bear in developing competitive services; barring qualified firms from the pool of potential PCS providers will serve only to hobble PCS telecommunications development.

2/ Affidavit of Alfred E. Kahn at 8, 17 [hereinafter Kahn Affidavit]. Professor Kahn's Affidavit is attached hereto as Attachment B.

3/ In the Matter of An Inquiry into the Use of the Bands 825-845 Mhz and 870-890 MHz for Cellular Communications Systems, Notice of Inquiry and Notice of Proposed Rulemaking, 78 FCC2d 984, 993 (1979) (emphasis supplied) [hereinafter Cellular Communications Systems].

1. Cellular Licensees

Allowing cellular operators to become PCS licenseholders within their own service territories is manifestly in the public interest. As the Commission recognizes, permitting cellular operators to acquire PCS licenses within their service areas will lead to greater production efficiencies.[4/] By acquiring PCS licenses, these operators can maximize their significant economies of integration. It would be grossly inefficient to deny cellular carriers the opportunity to expand the range, variety and diversity of their current offerings in new ways, particularly in light of cellular operators' considerable managerial, technical and commercial capabilities.[5/]

The Commission should reject unfounded arguments that participation in PCS by cellular operators "could lead to anticompetitive behavior."[6/] The benefits of cellular licensee participation in PCS are far too great to be outweighed by speculative threats to competition. Moreover, any anticompetitive concerns that may arise can be addressed effectively through a variety of proven regulatory mechanisms and policies. The Commission need not and must not resort to the most extreme option of flatly excluding from competition those firms who are among the strongest in their ability to advance PCS technology and its deployment to consumers.

4/ NPRM at 27, ¶ 66.

5/ See Kahn Affidavit at 8.

6/ NPRM at 27, ¶ 64.

a. Flatly Prohibiting Cellular Operators From Applying for PCS Licenses in Their Service Areas Will Disserve the Public Interest

If the Commission has any doubt of the wisdom of a true open market entry approach to PCS, it need only recall its reasoning in previous, similar contexts -- notably cellular. The arguments against cellular operators' eligibility for PCS licenses within their own territories are old and worn. The Commission considered -- and rejected -- virtually identical arguments in its cellular proceeding with regard to wireline local exchange carriers' eligibility for cellular licenses within their exchange areas.

In the cellular proceeding, various parties had argued that wireline local exchange carriers should be excluded from cellular license eligibility in their exchange areas because these firms allegedly would have every incentive to "strangle" fledgling services that could potentially compete with their landline businesses.[7/]

The Commission rejected such arguments, concluding that "an across-the-board prohibition on the entry of wirelines into the cellular market is not warranted."[8/] The Commission found "compelling public interest reasons to support wireline ownership of cellular systems, particularly when we have at our disposal measures that we are confident can minimize the risk of any potential anticompetitive behavior."[9/] Chief

---

7/ For example, parties argued that "these carriers will have incentives to limit cellular uses to services not competitive with exchange telephone service," as well as incentives to cross-subsidize and discriminate in interconnection arrangements. Cellular Communications Systems, Report and Order, 86 FCC2d at 530 (summarizing comments of Millicom, Inc.). Others urged that "there is potential for competition between wireline service and cellular service and that a wireline telephone company operating a cellular system would have the opportunity and incentive to engage in anticompetitive activities." Id. at 540-41 (summarizing comments of Telocator).

8/ Id. at 486.

9/ Id.

among such public interest benefits was the fact that "[m]uch of the successful research and development in the mobile field over the years has come from the wireline carriers."[10/]

History has proved that the Commission was right in allowing wireline local exchange carriers to participate in cellular. With the participation of local exchange carriers, the cellular industry has grown tremendously.[11/] The majority of carriers that have made a long-term commitment to the cellular business have been the very firms accused of harboring a murderous intent towards it. These carriers are and have been fundamental innovators and shapers of the cellular industry, both within and outside of their service territories.

Accordingly, the charge that wireline local exchange carriers would "retard the development of cellular as a means of providing alternative forms of exchange

---

10/ Id. at 489. Specifically, AT&T was present in most major markets and plainly had the experience and expertise in cellular, traffic and high-capacity local switching network engineering to deploy cellular systems around the country quickly. Id.

11/ The growth of new subscribers in cellular has increased at a staggering rate, as illustrated by the number of cellular subscribers, measured in millions, for each year from 1984 to the present:

1984 .092
1985 .34
1986 .682
1987 1.231
1988 2.069
1989 3.509
1990 5.283
1991 7.557

U.S. Dep't of Commerce, Statistical Abstract of the United States Table 889 (1992). Currently, there are almost ten million cellular subscribers, and for the first six months of 1992, the industry's customer base grew at an annual rate of almost forty percent. 58 Telecom. Rpts. 11 (1992). See also Kahn Affidavit at 9 ("I am unaware of any evidence or convincing argument, however, that telephone company participation in the cellular business has stifled its growth.").

access" has thus proved to be patently incorrect.[12/] Furthermore, it is certain that the cellular industry would not have evolved to its current state had such carriers been categorically excluded from cellular participation in markets that they served.

With respect to PCS development, the cellular licensee stands in a position similar to that of the LEC in cellular. The cellular industry has undeniably contributed much of the developmental impetus and essential technology to PCS, and cellular carriers are the entities with perhaps the most experience and expertise in radio engineering and spectrum management.

Indeed, as the Commission concluded in the Advanced Television Systems ("ATV") proceeding, the experience, expertise and resources of existing spectrum users are valuable social assets that should be employed rather than shunned. In ATV, the Commission limited license eligibility only to existing broadcasters because they have the "know-how and experience necessary to implement ATV swiftly and efficiently":

> They have invested considerable resources in the present system and represent a large pool of experienced talent. As initial participants in the transition to ATV, existing broadcasters will be making an appreciable capital investment in this new technology and will undertake the business risks associated with being in the forefront of such new developments.[13/]

Cellular carriers stand in a similar relationship to PCS as the broadcasters do to ATV. The cellular industry is the preeminent source of wireless communications talent, expertise, experience and infrastructure investment. It would be anomalous for

---

12/ United States v. Western Electric Co. , No. 82-0192, (D.D.C. 1986), Supplemental Memorandum of MCI at 7.

13/ In the Matter of Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service, Second Report and Order/Further Notice of Proposed Rule Making, 7 FCC Rcd 3340, 3343 (1992) ("ATV").

the Commission to value such benefits to the exclusion of all other applicants in the ATV proceeding, but to completely prohibit cellular providers from offering these same public interest benefits to the public in PCS alongside other qualified providers.[14/] To flatly disallow cellular licensees from bringing such experience and expertise to the marketplace for the provision of PCS services would be a grave disservice to the public, and has real potential to severely inhibit PCS development.

This is particularly true because PCS services are likely to be different from cellular services. If, for example, the PCS handset is to be a lightweight unit with long battery life, it must necessarily operate at very low power. Low power limits the radio's range, which in turn implies a network of smaller cells. Currently, a system comprised of small cells cannot satisfy the requirements of fast moving vehicles, but it can offer high capacity in densely populated areas for pedestrians, office workers, and others. It is reasonable to conclude, then, that there may be a need for separate low-power personal radio systems and high-power vehicular radio systems.[15/]

Regardless of how PCS evolves, however, cellular licensees will want to use their experience and expertise to improve PCS technology, develop new applications, use their existing backbone network (sites, switches, etc.) to reduce PCS costs, and enhance

---

14/ See also Kahn Affidavit at 8 ("[I]t would seem highly inefficient to deny them the opportunity to expand the range, variety and diversity of their offerings in these new ways, making fuller use of their already considerable managerial, technical and commercial capabilities.").

15/ In addition, if the Commission allocates sufficient spectrum for PCS in contiguous blocks, it may be technically feasible to internally divide the allocation to permit provision of medium and high speed data; these are entirely different market segments. Because cellular systems employ an entirely different paired channel approach, it will be extremely difficult and perhaps economically infeasible for cellular operators to provide these differentiated services. Even where PCS may provide similar services, they may be priced and marketed differently so as to target segments of the market not currently using cellular.

interconnectivity with existing cellular networks. These undertakings will contribute to the growth of PCS.[16/] The stunting of such growth, however, could well be the de facto result if the Commission excludes from their service areas those entities that are among the most capable in accelerating and implementing the delivery of PCS service offerings to the public.[17/]

In addition, barring cellular operators (and in the case of wireline licensees, the local exchange operators) from participation in PCS in their service areas could hinder PCS development in another way, as well. If such a ban is imposed, these carriers will have no incentives to aid new PCS entrants or to configure their networks hospitably; to the contrary, the Commission may end up providing the cellular industry with perverse incentives to resist new PCS entrants more vigorously, increasing inefficiency and disputes

---

16/ Innovative service opportunities may be lost if cellular carriers or LECs are excluded from PCS provision; the mere presence of other providers in the PCS marketplace will not necessarily generate comparable innovation. In the Commission's "Custom Calling II" proceeding, for example, the Commission had effectively barred AT&T from offering certain voice storage services by refusing to waive its structural separation requirements. AT&T had argued that it was economically infeasible for it to offer Custom Calling II services on an unseparated basis; raising the spectre of anticompetitive risks, commenters had countered that competition from independent vendors, "if unperturbed by AT&T's proposed integration of Custom Calling II with its basic services," would create comparably similar offerings. As the Commission later observed in its Computer III proceeding, however, this desired result never occurred:" In the five ensuing years, identical services have not emerged. The principal loser has been the public." In the Matters of Amendment of Sections 64.702 of the Commission's Rules and Regulations (Third Computer Inquiry), and Policy and Rules Concerning Rates for Competitive Common Carrier Services and Facilities Authorizations Thereof; Communications Protocols Under Section 64.702 of the Commission's Rules and Regulations, Notice of Proposed Rulemaking, CC Docket No. 85-229 (July 25, 1985), at ¶ 8 (footnote omitted) (emphasis supplied); see Am. Tel. and Tel. Co. Petition for Waiver of Section 64.702 of the Commission's Rules, Memorandum Opinion and Order, 88 FCC2d 1 (1981) (denying a waiver to permit Custom Calling II to be offered without structural separation).

17/ See Cellular Communications System, 86 FCC2d at 485. Indeed, in the cellular context, even where the Commission had concluded that cellular would be an effective substitute for conventional two-way mobile service offered by wireline carriers, it also concluded that "it is still premature to predict whether cellular will replace conventional mobile systems," and rejected such reasoning as a basis for excluding wireline carriers from applying for cellular licenses within their exchange areas. Id. (emphasis in original).

over interconnection issues. Broadcasters, for example, fought the cable industry for years once they were prohibited from owning cable systems. In contrast, cellular interconnection issues were resolved relatively quickly, since LECs were not barred from participation and had an interest in getting their own wireline cellular firms up and running quickly.

In the current scenario, there should be no flat government restrictions on the permissible scope of cellular companies' operations, especially given the nascent stage of PCS development. Should the need arise, the Commission has many regulatory tools with which to preserve competition, such as the implementation of non-structural safeguards.[18/] This has been the approach of the Commission in similar contexts where the benefits attending market entry of an industry are great vis-a-vis potential risks of anticompetitive conduct.[19/]

18/ Id. The Commission should consider that PCS service markets will already possess a significant amount of wireless and wireline competition, e.g., local exchange services, cellular carriers, paging carriers, two-way messaging services, data networks, and multiple PCS providers. This observation diminishes severely the competition rationale for imposing a flat ban on license eligibility for cellular operators within their service areas, or for reducing the ability of LECS to compete in PCS by awarding them a reduced spectrum allocation. Further, the large number of providers that Bell Atlantic has proposed (five) renders it even more unlikely that the Commission's anticompetitive fears will be realized. As the Commission itself has recognized, the actual impact on competition of permitting cellular providers to hold PCS licenses varies with the number of PCS licenses granted; if the Commission were to grant five competitive licenses, as Bell Atlantic suggests, there is much less tension between the two considerations. NPRM at 27, ¶ 65; Kahn Affidavit at 8.

19/ In its recent "Video Dialtone" order, for example, the Commission relaxed its telephone company-cable Cross-Ownership ban with safeguards, recognizing that allowing local telephone companies to respond to "technological and market incentives" for participation in the video market furthered public interest objectives in creating "an advanced telecommunications infrastructure."In the Matter of Telephone Company-Cable Television Cross-Ownership Rules, Sections 63.54 - 63.58, Second Report and Order, Recommendation to Congress, and Second Further Notice of Proposed Rulemaking (July 16, 1992) at 15, ¶¶ 25. These same objectives will be served by allowing for the participation of cellular incumbents in PCS, promoting diversity in service offerings and increasing consumer choice in the range of new services offered.

All parties should be allowed to compete vigorously in the PCS marketplace. The Commission should ensure that the public enjoys the maximum benefits of diversity and innovation, including the benefits spurred by the economies of integration and expertise that particular providers such as cellular operators can bring to PCS.

2. Local Exchange Carriers

The Commission recognizes that there is a strong case for allowing local exchange carriers to provide PCS within their service territories. Tremendous economies of scope between PCS and the wireline network will not be realized if LECs are prohibited from providing PCS within their service areas.[20/]

For their part, the LECs have evidenced -- through their participation in this proceeding and their performance of ongoing PCS trials -- their need to provide PCS to customers within their service areas. If development and deployment of universal, cost-effective and high-quality personal communications services is to proceed quickly, the Commission must permit full and equal LEC participation in the provision of PCS.

Today, local exchange carriers support the universal availability of a simple wireless technology: cordless telephones. Although limited in function and restricted in mobility, scores of millions of people find these "low-tech" extensions of the local exchange network very useful. One vision of PCS is a more highly featured and more mobile extension of the local network. By providing low-power radio access to their ubiquitous networks, local exchange carriers can provide an economical, high-quality,

---

20/ See NPRM 30, ¶ 73; Kahn Affidavit at 9-10.

widely available service to the public that offers a broad variety of features. Moreover, LECs must also be provided with the incentives to develop their wireline architectures in a PCS friendly manner.[21/]

Indeed, no other group of companies in the United States is as well positioned in terms of infrastructure, financial means, and telecommunications expertise to provide successful, economical PCS. LECs offer switching and transport capability, billing systems, databases, and intelligent network features. Moreover, they have the human capital to deploy PCS, and the experience and systems to maintain and improve it. Foregoing these efficiencies and economies of scope would be a tremendous and unacceptable waste of national resources.

The Commission has recognized that it would be grossly inefficient to exclude LECs from using wireless technology to expand their service offerings and customer base, especially in situations where that medium proved less costly than laying additional cable.[22/] As Dr. Charles Jackson has observed, LECs

> should have radio in their portfolio of technologies along with copper and fiber for building local loops . . . [I]t may be the case that radio provides a lower-cost alternative than copper for providing basic telephone service in many locations. If . . . radio becomes more cost-effective than copper for local loops in some circumstances (say new builds and capacity expansion in existing neighborhoods), denying LECS access to this technology will raise

---

21/ Id. at 30, ¶ 74. Bell Atlantic has already gone far in pioneering this process. Bell Atlantic's Personal Line field trials, set to get underway shortly in Pittsburgh, Pennsylvania, are principally devoted to integrating wireless networks with the public switched network. Indeed, of all the PCN field trials, Bell Atlantic's has been called "the closest to universal phone service." See Andrew Kupfer, Phones That Will Work Anywhere, Fortune (August 24, 1992) at 106.

22/ See NPRM at 30, ¶ 73.

costs to all telephone subscribers by raising the average cost of loop plant.[23/]

More fundamentally, LEC networks must have the ability to exploit fully advances in communications technology if the national telecommunications infrastructure is to remain efficient and up-to-date. This "evolution" of technologies benefits all customers by providing PCS access to the most subscribers in the shortest period of time.

Speculation that LEC participation in the provision of PCS will impede PCS competition is just as unfounded as comparable claims leveled against the cellular operators. As discussed earlier in connection with cellular licensees, the dire predictions surrounding LEC entry into cellular proved to be completely erroneous. Just as the LECs have proven to be primary innovators and competitors in cellular, they will also greatly enrich the PCS marketplace and provide the same public interest benefits.[24/]

To do so, however, requires that LECs be permitted to apply for full PCS allocations in the areas in which they serve. Once again, the development of PCS is both too important and too nascent to exclude or reduce the participation of any qualified competitor -- especially competitors offering the expertise and economies of integration provided by local exchange carriers.[25/]

[23/] Written statement of Dr. Charles L. Jackson before the Federal Communications Commission En Banc Hearing on Personal Communications Services (December 5, 1991) at 10.

[24/] See Cellular Communications Systems, 86 FCC2d at 482-92; Kahn Affidavit at 9.

[25/] Indeed, as Professor Kahn suggests, the arguments for including or excluding LECs "apply with almost equal force" to the wired distribution networks of cable providers and other alternative local exchange carriers. Kahn Affidavit at 10. None of these providers should be excluded from bringing their unique strengths to the PCS marketplace.

B. PCS SERVICE AREAS

For both its 2 GHz and 900 MHz allocations, the Commission has proposed several service area options, ranging from national to regional to local licenses. As Professor Alfred Kahn observes in his attached Affidavit, the Commission's task in defining PCS service areas is to "try to strike the best possible balance between economies of scale, on the one side, and the advantages of a multiplicity of entrepreneurs, on the other -- subject to subsequent correction by a free market in operating rights."[26] Thus, in proposing a continuum of service area options, the Commission has observed that smaller service areas may permit broader participation of firms of all sizes in the PCS market, yielding perhaps greater technical diversity and service innovation, while larger service areas would permit firms to maximize economies of scale and scope.[27]

It is vital that the Commission authorize at least two PCS licensees to offer service on a nationwide scale. Whatever local or regional service area scheme may be adopted by the Commission,[28] the benefits and efficiencies offered by a nationwide information network are simply too great to be ignored. Nationwide licensing will facilitate the efficient rollout of uniformly inexpensive, service-rich and universal personal

---

[26] Kahn Affidavit at 9.

[27] NPRM at 25, ¶¶ 58-59.

[28] The Commission should authorize two or more nationwide licenses. Alternatively, the Commission could authorize the presence of several local or regional licensees, along with two national licensees for each PCS market, adopting in the process one or several different service area schemes. Firms interested in serving "only their local areas," NPRM at 25, ¶ 59, could do so by applying only for the local service area license and by providing highly differentiated, customized services tailored to the particular commercial and personal needs of the users within their territories. Yet, customers in the same area could also receive the services and competitive benefit offered by a nationwide licensee serving the same territory.

communications services. The authorization of nationwide PCS licenses is a critical step in building a nationwide information infrastructure which is essential to assure the United States' continuing global competitiveness in the Information Age.

1. Background: International and Domestic Experience Support the Nationwide Licensing of PCS

Worldwide, most nations that have addressed the licensing of PCS and cellular have chosen to license these services on a nationwide basis. The United Kingdom, for example, authorized two cellular and three PCN licenses -- all nationwide. Germany issued two nationwide digital cellular licenses -- one to DBT Telekom, the other to Mannesmann Mobilefunk GmbH. Germany has also announced its intention to award a third nationwide license in the 1800 MHz band.[29/]

In November 1990, Australia decided to grant three nationwide cellular licenses. AUSTEL, the Australian regulatory agency, studied the possible structure for the third cellular license and reported its findings July 31, 1991. In that study AUSTEL explicitly considered whether to grant regional or nationwide licenses when considering opening up a third cellular band. AUSTEL concluded that a third nationwide licensee would enhance domestic and international competitiveness, and would simplify international roaming agreements.[30/]

In short, nationwide licenses are the rule internationally, with few exceptions. The rationale for such licenses, expressed most clearly by AUSTEL, is the superior economic efficiency of such arrangements.

29/ See Licensing and Regulation in Mobile and Satellite Communications, Federal Minister of Posts and Telecommunications, Bonn, June 1992, at 14.

30/ AUSTEL Report on the Third Mobile License at 15.